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ABSTRACT

Collaborative learning may be an approach to for a liberal arts college program to help improve the retention of minority students. The importance of collaborative learning can be seen in the power of collaborative action in the Civil Rights Movement and the Women's Rights Movement. In a collaborative experience the teacher acts as a facilitator to build a sense of community, and allows the student to participate in a situation that makes productive use of students' differences. Collaborative experiences require both teacher and students to risk a departure from the traditional teacher/pupil behavior to venture into a different kind of academic partnership. In a collaborative setting the teacher's role is as a "task setter." The student's role is to become "re-acculturated" to engage and trust peers in a team approach to learning. Collaborative learning experiences for the adult are more apt to be feasible than that for the traditional student. In considering collaborative learning as an alternative teaching strategy, teachers are able to make students a part of the evaluation process and to diffuse the ability of the students to question their assessment. Collaborative learning can also be applied to higher education, industry, and government. Includes five figures showing various models for courses using collaborative learning. (Contains 26 references.) (JB)

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COLLABORATIVE LEARNING

A PROGRAM FOR IMPROVING THE RETENTION OF MINORITY STUDENTS

by

Lemuel Berry, Jr., Ph.D.

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I. INTRODUCTION

This research project had two objectives. The first objective was directed toward defining the term "collaborative learning." As an outgrowth of a definite description, the project carefully assessed the possibility of such a learning process being implemented at a state college or university. The second phase of this research addresses those developmental processes which must be considered if learning modules are to be implemented in a liberal arts institution. Such factors as student interest, family/educational background, analysis of assessment scores, etc. fit into the scheme of this program. A number of specific issues were also addressed through the formulation and completion of this research. They included:

- defining how learning occurs through social interaction
- describing how students can make productive use of differences
- describing methods/procedures which will help students negotiate cultural and social difficulties that such task pose for them
- describe/define how developmental theory informs the planning courses and assignments that foster among a student's critical thinking abilities and the acquisition of a sense of themselves as participants in the construction of knowledge
- redefine the position of the student and teacher

This project has provided a great deal of insight and relates to the need for improvements in various phases of the academic arena. Obvious concerns are immediately directed to library resources, support services and teacher preparation. These and other issues must be thoroughly assessed if collaborative learning is to be effective.

In addressing what has been a consistent problem in retaining minority freshmen and sophomore students, it was necessary to seek alternative pedagogical techniques which

would more fully engage students in the learning process. After researching several methodologies, I chose to explore the feasibility of using collaborative learning to improve the performance of minority students and reduce what has been a fairly high attrition rate.

In an article published by the National Institute for Staff and Organizational Development, Dr. Philip Uri Treisman reported on strategies implemented at the University of California at Berkeley which have been remarkably successful in improving the performance of minority students in college-level mathematics. The mathematics workshop has five functions:

1. To build a community of minority freshmen that is academically oriented and a source of peer support.

2. To provide minority students with an extensive orientation to the university and with ongoing academic advisement.

3. To advocate the interest of minority students and to monitor their academic progress and adjustment to the environment.

4. To provide minority freshmen with ongoing instruction in order to develop independent learners.

5. To link high school level and undergraduate level affirmative action efforts.

Treisman identifies the goal of the workshop as, "...developing independent learners who can function effectively as college students beyond their freshman and sophomore year. Not all students participate in the workshop; however, the average grade for those not participating in the mathematics workshop was D-. The average grade for the 42 first-term workshop students was B- (Treisman, 1983). Retention has improved as well. Of the 60 students who participated in the mathematics workshop for the academic year 1978-79, all but 5 completed

their second year at the university (8% attrition). Before the inception of the Mathematics Workshop, the attrition rate for black freshmen exceeded 50% by the end of the first semester.

The intervention strategy employed at Berkeley utilizes highly structured collaborative experiences from the outset. Before students begin classes, study groups are formed to allow them an opportunity to get acquainted. After an initial screening test, the students and their advisors develop an appropriate academic plan. Additionally, freshman students are paired with a sophomore who monitors their progress. This process of collaboration is a reciprocal dialogue which benefits both freshman and sophomore students.

II. PROBLEM STATEMENT

American colleges and universities have traditionally accepted students who come from a broad spectrum of academic backgrounds. Most colleges and universities provide support services which will enhance the quality of learning. Although the admission policy is flexible and most assuredly provides academic opportunities for the minority student, it does not take in account the problem(s) which many of these entering students bring to the campus.

Over the past five years, many institutions have experienced a decline in its retention of minority students. Many students, because of various reasons, leave the university in their first or second year of study. Although research and or follow up studies have not been implemented to identify those problems which may have contributed to the departure, one fact is quite obvious. That is, a great majority of the students who withdraw are academically poor in the area of communicative skills, mathematics and the sciences.

Coupled with the problem which the student has in the area of basic or area studies is his/her inability to adjust to a new community organization and structure. This factor has also contributed to minority student's withdrawal from American colleges and universities.

This project, which specifically addresses those problems identified is expected to mend fences in academic practices while providing a fresher approach to learning.

III. A HISTORICAL PERSPECTIVE FOR COLLABORATIVE LEARNING

Two of the most important social movements in this country were the result of collaborative initiative; the civil rights movement, and the women's rights movement. Both began as social issues warranting action by concerned social groups. The success that each of these movements has achieved has been the result of collaborative efforts pooling the intelligence of multiple disciplines, all seeking a consensus of truth.

In the educational profession collaborative learning is a term that was applied by Charity James, Leslie Smith and Edwin Mason, scholars who worked at Goldsmith's College, University of London in 1970; and it was Edwin Mason who published a text entitled Collaborative Learning (Deciccio, 1988).

Kenneth Bruffee states that the importance of collaborative learning in education began in the late 1950's with a book by Theodore Newcomb, College Pen Groups, The American College, ed. Nevitt Sandord; and with the work of Dr. M.L.J. Abercrombie at University Hospital, University of London (Bruffee, 1987). Newcomb suggested that peer group influence is, "...a powerful but wasted resource in higher education" (Bruffee, 1987). In Abercombie's book, The Anatomy of Judgment, she asserts that medical students who were diagnosing patients were able to reach a consensus on the patient more accurately and more quickly when working in small groups (Bruffee, 1987). Bruffee goes on to say that Abercombie's most amazing discovery was that "...learning diagnostic judgment is not an individual process but a social one. Learning judgment patently occurs on an axis not between individuals and thighs, but among people" (Bruffee, 1987).

We are accustomed to the concept of solo performance in the humanities. A musicians recital, the featured artist's gallery show, the solo dance of Clara accompanied by Wanin rodents in Tchaikosky's Nut Cracker Ballet, all are solo efforts; and, collaborative as well.

In "Writing Groups: History, Theory and Implications: Studies in Writing and Rhetoric", Anne Ruggles Gere traces the history of the solo performer in writing. She points out that when copyright law was first established in 1533, it was designed to protect the rights of publishers not writers ... "writers were viewed as either reassembling pre-existing materials or following directions of a muse" (Gere, 1987). She further states that this right to publish with or without the permission of the author continued for at least 200 years (Gere, 1987). In England, this practice did not change until 1710 with the Statue of Anne which began protecting the individual author. This policy served as the model for American Copyright Law which began shortly after the Revolutionary War (Gere, 1987).

With the advent of the Industrial Revolution, there was a growing feeling that, ..."industrialism loosed evil forces in the world, specifically those of alienation" (Gere, 1987). In order to confront this alienation, nineteenth century sociologist Emile Durkeim and Ferdinand Tommes concentrated on theories of mass society and blamed industrialization for a loss of a sense of community (Gere, 1987). Durkheim states:

> "When individual minds are not isolated but enter into close relation with and work upon each other, from their synthesis arises a nev king of psychic life. it is clearly distinguished by its peculiar intensity from that led by the solitary individual. ...this activity is qualitatively different from everyday life of the individual as is the superior from the inferior, the ideal from the real. ...periods of creation or renewal occur when men from various reasons are led into a closer relationship with each other. When reunions and assemblies are most frequent relationships better maintained and the exchange of ideas most active (Gere citing Durkheim, 1987).

Long before Kenneth Bruffee, collaborative methods were being employed in the classroom. In Albert C. Deciccio's article, "Social Constructionism and Collaborative Learning: Recommendations for Teaching Writing", he includes a selected bibliography called, "The Social Approach to Teaching Composition: Some Antecedents." Several articles are included which date from the late nineteenth and early twentieth century which concern themselves with early experimental approaches taken in the classroom:

> Maxwell, William H., "An Experiment in Correcting Compositions." Educational Review 7 (1894): 240-46
>
> Noyes, Ernest Clapp, "Class Criticism as a Means of Teaching Composition." School Review 13 (1905): 696-701
>
> Thompson, C. J. "A Study of the Socialized Versus the Academic Method of Teaching Written Composition". School Review 27 (1919): 110-33.

In more recent years, the dialogue on collaborative learning continues with research by individuals. Harvey Wiener believes that, ..."Problems in education in the seventies and eighties - changes in student population, the growth and number of nontraditional learners in the collegiate body, the alienating nature of learning in large classrooms with too many students, the acknowledged decline in freshmen entry-level skills is reading, writing, speaking, listening and thinking have shaken our faith in conventional teaching strategies (Wiener, 1986).

In research conducted by David Johnson (Psychological Bulletin, 89) and Scnomo Sharan (Review of Educational Research, 50) it has been shown that students in noncompetitive collaborative groups learn better than in classrooms which are competitive and highly individualized (Bruffee, 1987).

noncompetitive collaborative groups learn better than in classrooms which are competitive and highly individualized (Bruffee, 1987).

As Kenneth Bruffee states in "The Art of Collaborative Learning", ..."Collaborative learning calls on levels of ingenuity and inventiveness that many students never knew they had. And it teaches effective interdependence in an increasingly collaborative world that today requires greater flexibility and adoptability to change than ever before" (Bruffee, 1987).

IV. SOCIAL INTERACTION IN COLLABORATIVE EXPERIENCE

Educational theories, principles and practices involving approaches to enhance student learning have taken a number of different directions during the past decade. The various initiatives, to say the least, were brought to the forefront because of a number of factors. Among these factors are:

1. national concerns related to poor communicative skills among students in American high schools and colleges;
2. national concerns related to poor mathematic skills among students in American high schools and colleges;
3. national concerns related to poor science skills among students in American high schools and colleges;
4. the national drop-out rate of minority students;
5. the continuous and rapid increase in the minority population (Asian, Black, Hispanic, Native American and adult learner); and
6. concerns in regard to preparing a population for the twenty-first century.

These and other concerns merely touch the surface for educators, administrators in higher education, economists, and public officials to name a few.

Although there are a number of views presented to educators from non-academic areas about teacher/student relationships, teaching and learning theories, etc., very few laymen look at the entire student. It is only through an understanding of the student and his environment that one can accurately evaluate, assess and make recommendations for change in teaching and learning practices.

The minority population, traditionally viewed as Black is no longer the sole focus of the American education system. Educators must now, and in the future address cultural, environmental and social issues related to the Native American, Black, Hispanic and Asian student. But for many, maintaining a traditional form of academic practice is the "status quo."

The presence and involvement of multi-racial, multi-cultural and multi-ethnic groups in the schools mandates that creative approaches to developing student skills, attitudes and understandings must move in new and varied directions. Perfection in performance must be the foundation of all collegial programs, which expect to induce positive change.

Initially, educators must study a few of the most common problems which the minority student feels are prevalent or in fact do exist. Ten myths about the education of the minority American student are listed below:

1. Learning is due to innate abilities and minorities are simply less capable of educational excellence than whites.

2. The situation is hopeless; the problems minority youths face, including poverty, teenage pregnancy, unemployment, drug abuse and high dropout rates, are so overwhelming that society is incapable of providing effective responses.

3. Quality education for all is a luxury, since not all jobs presently require creativity and problem solving skills.

4. Education is an expense and not an investment.

5. Equity and excellence in education are in conflict.

6. All we need are marginal changes.

7. Minorities don't care about education.

8. Bilingual education delays the learning of english and hinders academic achievement.

9. The problem will go away.

10. Educational success or failure is within the complete control of each individual.

It is inappropriate to employ any new approach until all of the aforementioned are recognized and acknowledged as problems.

A collaborative based experience, if well directed, can resolve many of the social problems while establishing strong learning techniques. Zajone (1965) reviews the literature concerning "social facilitation" and concludes that the mere presence of other people enhances the performance of tasks for which the person is highly skilled. Under a wide variety of circumstances, groups can solve problems more effectively than the average individual. In addition to this, studies have shown that the beliefs and expectations of others can have a direct effect on a student's performance. Mbiti, 1968, Herskovits, 1958; Bracy, Meier and Rudwick, 1980, feel that "traditional African and Black American experiences have emphasized the enjoyability and objective benefits of collective learning as compared to individual endeavors. If this is in fact true, Blacks and other minority students should be placed in an environment which not only encourages but supports collective learning.

Every new learning concept attracts a number of doubters until such time that the success stories are too obvious to overlook or disregard. In many ways, educational practitioners function like the American Medical association (AMA). That is, new ideas and concepts must be tested in a non-secure environment before they are implemented on the home front. Obviously, this writer is not suggesting that new learning trends be cast upon the rocks

but; that more modules of such concepts be tested when other traditional and non-traditional programs have failed. Although the research involving collective learning is still forthcoming, much has been said in its favor. Among the few notable statements are:

> "Students learn better through non-competitive collaborative group work than in classrooms that are highly individualized and competitive." Robert E. Slavin: Collaborative Learning

> "Collaborative learning is related to these conceptual changes by virtue of the fact that it assumes learning occurs among persons rather than between a person and things." Bruffee also states that "in general, people learn judgment best in groups and that the social process of learning has something to do with language and with interpretation."

One commonality found among educators involved with this approach is that collaborative learning calls on levels of integrity and interventiveness that many students never knew they had. And, it teaches effective interdependence in an increasingly collaborative world that today requires greater flexibility and adaptability to change than ever before.

Whipple (1986) in the Collaborative Learning Action Community, a section of the American Association of Higher Education (AAHE), defines collaborative learning as follows:

> Collaborative education is a pedagogical style which emphasis cooperative efforts among students, faculty, and administrators. Rooted in the belief that knowledge is inherently social in nature, it stresses common inquiry as the basic learning process.

This analogous statement leads one to define the role of student and teacher. For all practical purposes, the teacher reverts to a guide rather than the authority figure. In addition, the teacher becomes a researcher, an organizer and facilitator. The student, on the other hand, learns to assume more active roles, taking responsibility not only for their own but for others learning, including that of the teacher.

In order for these new roles to function effectively, the participants may choose to initiate a learning contract. This contract as defined by Sheridan may have five components. They are:

1. The students are asked to diagnose their needs.
2. The student(s) specify their expectations for the course.
3. They describe how they intend to meet their objectives, identifying specific resources and strategies they intend to use.
4. State in what form they will present the evidence.
5. The contract describes how the work should be evaluated, whether by peer review, response from the instructor, or self-evaluation.

Through this process, the instructor should let leadership emerge naturally, support a decision-making process which is autonomous and structure timetables, goals and objectives.

Figure One (Fig. 1) indicates what a traditional collaborative experience might involve as it relates to the role of teacher and student. As suggested in this flow chart, each of the multi-cultural ethnic groups has an equal role in the completion of the project. The teacher assumes a new role as the resource person and facilitator.

Collaborative Learning Flow Chart
in a Multi-Cultural Class Environment

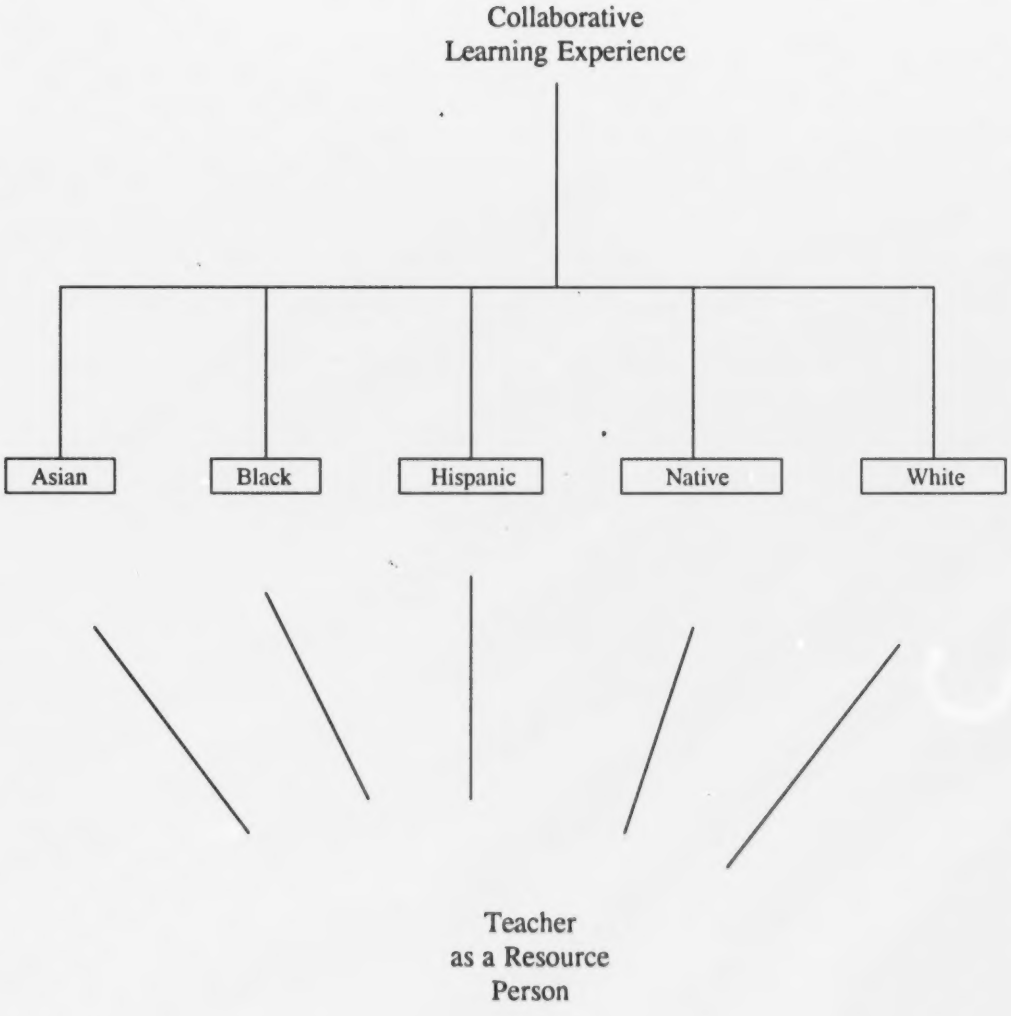

Figure 1

Figure 2 depicts the traditional interaction among students which takes place in a collaborative learning environment.

Traditional Interaction Among Students Involved in a Collaborative Learning Experience

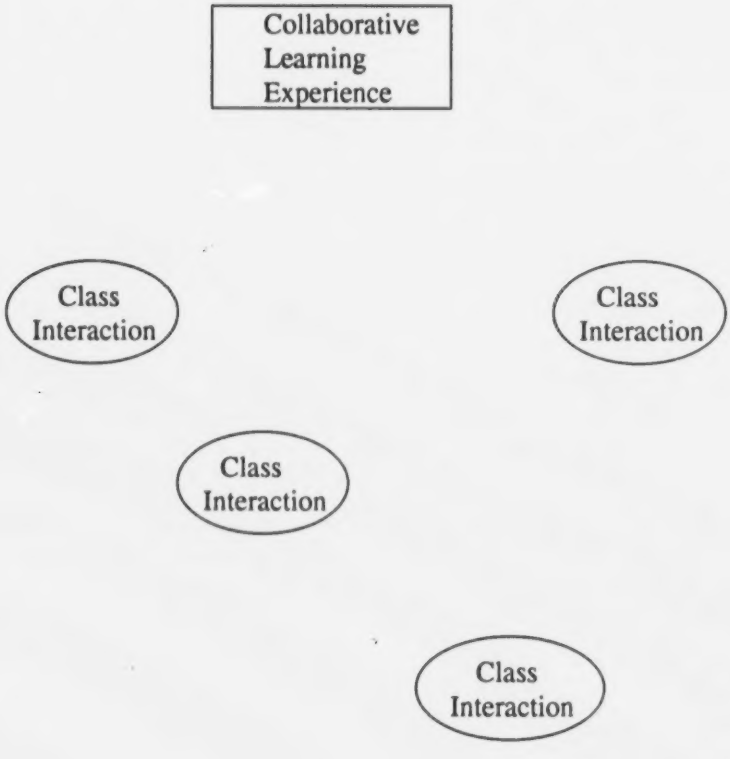

Figure 2

Collaborative learning will more than likely involve a great deal of social and cultural interaction. Because of the multi-cultural, multi-ethnic and multi-racial participants involved, learning will be unique and creative due to the variance in lifestyles.

Social interaction will play a significant role in the collaborative learning program, and in retrospect, the interaction will contribute not only to the subject being addressed; but, lead to a better understanding of the players in this classroom setting. Many of the social and cultural experiences which the student will be involved may cross cultures. However, all experiences will and should contribute towards productive usage at the time the student enters the work force. Learning experiences will most likely fluctuate based on the project. The teacher should expect a greater level of cultural and social interaction if topics such as religion, communal laws, music, history, dance, folk literature, etc. were the focal point. This is not to imply that the sciences and other pragmatic academic areas will not lend themselves to a high level of interaction. But, in all practicality, the level of knowledge of the students being addressed in this report would lead one to think on the contrary.

The interaction taking place during the collaborative learning experience should be utilized for a number of purposes.

1. the teacher as facilitator should build a sense of community;
2. the student as participant should be placed in a situation to make productive use of those differences noted.

Speaking to this point, various methods and procedures must be implemented which will help students negotiate those cultural and social difficulties that might impede the task which has been collectively accepted as the collaborative learning experience. The teacher as facilitator may employ many of the approaches identified.

1. Each student identify himself in a public forum. At this time, the student would have the opportunity to discuss family, hobbies, likes/dislikes, etc.

2. Each student identify his/her academic strengths and academic interest. This information would provide each student with some insight at the time collaborative assignments are made.

3. The teacher as facilitator could organize educational field trips prior to the collaborative learning experience. A visit to an art gallery which has representative works of culturally diverse groups would have a major impact on the student.

4. The teacher as facilitator could initiate what many call a "Rap Session." The desired goal of the "Rap Session" is to afford the student an opportunity to communicate at a level that is of interest. Terminologies, cultural phrases, regional dialogue and vocal patterns, etc., should surface, be discussed, and analyzed in regard to bridging those cultural and social differences which appear in institutions of higher learning.

Kenneth Bruffee also provides those individuals participating in collaborative learning with a conventional format for the structure of such a class (Bruffee, 1972).

A Collaborative Learning Convention

1. The purpose of this convention is to organize class members to teach one another and support one another in learning. Mutual interests and responsibility--affinity, rather than autocratic control--is to create coherence among the members of the class.

2. The first week or two of the term may be a period of orientation. The teacher may direct the meetings, introduce the subject matter, and provide basic concepts which class members are likely to find useful in exploring the material, and in developing their own line of thought regarding it. Students will then declare their interest in units of the subject matter. The teacher will divide the class into collaborative groups of four to six students each, according to the interest declared by each member.

3. Each collaborative group will be responsible to the rest of the class for its own unit of material. Members of the group will decide how to teach the material to the rest of the class, and the emphasis to be made. The group will then direct and govern the class for one to two weeks of the term. Groups may aid discussion by providing supplementary information in written form.

4. Each class member will be responsible individually to the group which is in charge of the class. Each member will also be responsible for his own preparation and for contributing to class discussion. And each member will be responsible for the work his group undertakes in preparing material and directing the class.

5. The teacher's responsibility will be to determine before the term begins the subject mater and written requirements of the course. Both may be revised in negotiation with the class. The teacher will also provide orientation, and act as mediator, as judge in the process of evaluation, and as the class's resident resource. The teacher will provide resources and advice on request, to the limit of his ability, and may also provide unrequested resources he thinks may be useful to the class in their work. The teacher will be available for consultation on request to the class as a whole, to each learning group, and to each individual member of the class. He will hold individual conferences with members of the class at least once during the term. Any class member at any time may choose to learn independently with the teacher's guidance.

6. Class members will be responsible to each other and to the teacher for evaluation. Each student paper will be read and evaluated, in writing, by a jury of at least two class members, hence, each student will read two papers as a juror for every one paper he writes himself. After the student jury has considered each paper, the teacher will read and evaluate it, weighing student critical opinion with his own, providing his own written comment, and assigning a grade if necessary.

7. Twice during the term (mid-term and end of the term) class members will evaluate their work, the work of other groups, the class as a whole, and the teacher's contribution. Also, at these times the class as a whole will recapitulate the subject matter covered. Discussion of the nature and process of the course will be channeled to these limited periods in order to insure coherent, uninterrupted consideration of the subject matter during the balance of the term.

Furthermore, Bruffee (1972) feels that "students should gain an understanding of subject matter which is at least as thorough as the understanding they may have gained through traditional teaching."

V. GENERIC COLLABORATIVE EXPERIENCES

A cursory review of the literature on collaborative learning revealed repeated references to the idea that "collaborative learning helps prepare students for effective interdependence in an increasingly collaborative world" (Bruffee, 1987). Such approaches to the teaching/learning process require a willingness on the part of both teacher and student to risk a departure from the traditional teacher/pupil behavior with expectations to venture into a different kind of academic partnership.

Responsibility for learning becomes more of a role for the student as he/she participates in a group learning experience. A role quite different from possibly absorbing or perhaps at best, being exposed to the knowledge from an expert (Watkins, 1989). Group learning would appear to make for a more committed student. One who has an on-going stake in his own academic development; clearly will strive toward the successful completion of the task/project.

In a sociology class, students could be guided by the professor toward a study of communities, by exploring elements of community design, diversity, bias and prejudice, governmental structure, program development, needs assessment and networking. Through the compilation of these and other demographic data, sociological research projects can be developed and expanded. These designs could be modified and utilized in other humanities, social sciences and some of the more technical studies, such as mathematics and engineering.

Cora Agatucci, in a paper entitled "Empowering Students Through Collaborative Learning Strategies" discussed linking English and study skills instruction to specific general education courses such as geography, history or art appreciation. This approach would enable students to successfully bridge the gap between high school and college. One of the learning activities employed consisting of the use of small groups is called peer response or critique groups. After guidelines and goals for group tasks had been clearly presented, peer response (critique) groups study assigned readings and students' essays. The students subsequently identify strengths and weaknesses in the above which enhanced their developmental skills. Students were able to undertake their critiquing process while being supported by the "safe" environment of the classroom; an environment made "safe" by the careful creation of an atmosphere which allows both teacher and student to share and to take the risks necessary for a participatory experience (Agatucci, 1989).

Group learning according to Newell "produces greater analytical, critical and cenceptual skill as well as motivation and self confidence on the part of the student" (Newell, 1990). Learning groups usually focus on a task which is composed of elements designed to enhance skill development. The "task should:

a. result in a product with mutually agreed upon values;

b. be sufficiently complex to engage all the learners and provide an active role for each of them;

c. be capable of being completed with the resources available; and

d. be sufficiently structured to facilitate orderly participation"

(Newell citing L and A, 1990).

Sigrin Newell reported on a collaborative learning project in engineering design at the Rensselor Polytechnic Institute (RPI) in Troy, New York. Several professors coordinated their courses so that the students in bio-engineering design courses are theorictically taught skills which can be applied to the actual construction tasks in another course. The goal of the courses are to teach students to be effective design engineers in the career world of bio-medical engineering, which Newell describes as an interdisciplinary subject, frequently using team work (Newell, 1990).

In reviewing the Newell article, we are reminded again that students are better prepared for the work world when they have experienced the benefits of collaboration in their college courses.

Some classes may involve the concept of team teaching where professors with expertise in various areas of a discipline could assist students in developing group projects focusing on specific interests. Each group could develop and critique its topics which could then be presented to the larger class community. The professor should establish and communicate clear objectives, procedures, time tables and evaluation methodology. Groups would then design experiments and/or use such techniques as brain storming, debate, committee problem-solving and small research projects (Sheridan, 1989).

Early in the semester, the parameters of the course should be developed with the professor monitoring the students throughout the course to insure that the course content is being adequately addressed.

Although the aforementioned is a departure from the traditional lecture-test pattern, it clearly has the potential of developing students capable of functioning productively in a society where major decisions are made daily using the group collaborative process.

VI. THE TEACHER'S ROLE IN COLLABORATIVE LEARNING

"How we teach is as important as what we teach" (Agatucci, 1989).

Weiner describes the role of the collaborative teacher as a "task setter", and suggests that the success of the collaborative effort, "...depends primarily upon the quality of the critical tasks students perform in groups" (Weiner, 1986). He goes on to say that the difference in working in groups and collaborative learning is that collaborative learning seeks to reach consensus by their own authority (Weiner, 1986).

As stressed by Bruffee, many students enter the classroom at the beginning of a semester as strangers; therefore, collaborative learning often begins with a process of reacculturation to transform the student from the familiarity of the traditional classroom, where the teacher lectures and students listen, to a model where there are participatory learning experiences (Bruffee, 1987). Such departure from the traditional custom requires a willingness on the part of both teacher and student to venture into a different kind of partnership, a partnership where the responsibility for learning becomes more of a role for the student as he/she participates in a group learning experience. This role is quite different from passively absorbing or being exposed to the dispensing of knowledge by an expert (Watkins, 1989).

Strickland, in an article entitled "Confrontational Pedagogy and Traditional Literay Studies," proposed that in order for knowledge to be produced, rather than merely reproduced, the teacher must resist the students' attempts to defer to the teacher as the authoritative dispenser of absolute knowledge". One does not wish to deny the authority of

the teacher, or negate the expectation that the teacher is the one who is expected to know, nor to engender the pretense of detachment" (Strickland, 1990). He sees the role of the teacher as being divided into three functions:

1. Convener - empowered and constrained by the university, the teacher has the responsibility to:

   a. set the parameters of the course
   b. prepare a course syllabus
   c. prepare a reading list

2. Archivist - provide extensive bibliographies to provide students with access to varied writings in areas of the course, to provide a base of knowledge which will be useful as they develop ideas and positions on the issues which arise in class.

3. Adversary - to critique the progress and involvement of students through assignments which assess the student's exploration and comprehension of issues.

(Strickland, 1990)

It is noted that Trimbur indicated Bruffee and others have argued collaborative learning may be distinguished from other forms of group work since collaborative learning organizes students not only to work together on a common project; but, more importantly to engage in a process of intellectual negotiation and collective decision making thus, reaching consensus through an expanding conversation. This is an aim of collaborative learning. Consensus involves the capacity for self-organization, cooperation and common action. Logically, the goal of reaching consensus gives the student a sense of contributing to the whole and does not inhibit individuality. On the contrary, consensus enables individuals to participate actively and meaningfully in group endeavors. Through such social interaction, students expand themselves and explore aspects of learning in an atmosphere that encourages

expressions of differences and commonalities (Trimbur, 1989). Such interaction takes place on a number of levels:

1. In small discussion groups
2. Groups in a class
3. Between class and teacher
4. Between the class, the teacher and the Wider Community of knowledge

"John Trimbur believes that those who are unfamiliar with collaborative learning often miss, "...the intellectual negotiation that underwrites consensus." The demand for consensus that is made by a task promotes a kind of social pressure. Sometimes, to be sure, this pressure causes the process of negotiation to short circuit when students rush to an answer. When it works, however, the pressure leads students to take their ideas seriously, to fight for them, and to modify or revise them in light of other's ideas. It can also cause students to agree to disagree--to recognize and tolerate differences and at best to see value systems, set of beliefs, etc., that underlie these differences" (Wiener citing Trimbur, 1986).

Albert C. De Cicco, at the end of his paper, "Social Construction and Collaborative Learning: Recommendations for Teaching Writing," makes several suggestions for the collaborative writing class:

1. Consider alternative strategies for the think-write pedagogy. Encourage students to engage in dialectical process between teacher and student, leaning heavily on conversation about aims, ideas, and methods, the task being to elicit from students the kind of talk about writing the larger community of literate writers usually engage in.

2. Re-evaluate the nature and kinds of assignments we prepare for our students. Develop assignments which encourage writers to talk, write and read as they proceed through the process of collecting information, focusing, designing, ordering, drafting, and finally clarifying the text for the reader.

3. Consider ways in which the teacher may redefine his role in the classroom. Rather than assuming the traditional role of imparting information, teachers should act as facilitators, co-workers, enablers, resources and even referees. Share the power of learning.

4. Consider alternate ways of evaluating the writing of our students--peer critiques, reading early and final versions of text. (De Ciccio, 1988).

De Ciccio suggests that affecting these recommendations will produce more active student writers who will, "...engage in the ongoing conversation of humankind" by allowing them, "...first to vest authority and trust tentatively and for short periods of time in members of small, transitional working groups; then more confidently in the larger community that constitutes the class; and, finally in themselves as individuals as they internalize the process and the values of the newly formed community of writers" (De Ciccio citing Bruffee, 1988).

Bruffee identifies three essential ingredients for the success of autonomous collaboration:

1. A willingness to grant authority
2. A willingness to take on the exercise authority
3. A context of friendliness and good grace

(Bruffee, 1987)

Wiener insists that a statement of task be written down and should include several components:

1. Instructions on how to collaborate in a particular activity.

2. A copy of the text or texts which are to be the focus of the collaboration.

3. Questions appropriately limited in number and scope and offered in sequence from easier to more complex questions requiring critical thinking that leads to sustained responses from students at work in their group.

4. Assigning the job of recording the consensus of the group in writing activities.

5. A required formal presentation to the class, participation in a debate with recorders from the other groups or some responsible social activity.

(Wiener, 1986)

In evaluating the process of collaborative learning, Wiener suggests considering the teacher as classroom manager - how does the teacher implement collaboration? Is the task laid out well? Do the established groups function easily? What does the teacher do while the groups work? Wiener suggests that teachers should float from group to group answering students questions, asking probing questions, and guiding students in the task without usurping the authority of the group and thereby hindering the process (Wiener, 1986). When the group work has been completed, the teacher's role changes to synthesize all the results from all groups into a meaningful dialogue (Wiener, 1986).

Bruffee reminds us that for collaborative learning to be successful in an age where educational tradition argues against it, careful work toward creating conditions in which learning can occur must be established. Clearly, in creating these conditions, the teacher must recognize and accept his/her role in organizing people into groups for the specific purpose of learning. However, the teacher can not take a laissez-fair attitude, abrogating his/her responsibility as a catalyst in the learning process.

Wiener citing Bruffee states, "What happens when we learn something, is that we leave a community that justifies certain beliefs in a certain way and join another community that justifies other beliefs in other ways. We leave one community of knowledgeable peers and join another" (Wiener citing Bruffee, 1986).

VII. THE STUDENT'S ROLE IN COLLABORATIVE LEARNING

Making the most out of an experience in group learning mandates that the student be assisted/guided to divorce him/her self from traditional learning modes, and, as referred to by Bruffee, engage in a process of "reacculturation" (Bruffee, 1987). Remembering that our educational system and mores have in fact, discouraged peer collaboration, students have internalized the emphasis placed on individual tasks and achievements. Although it is often difficult to learn and adjust to new or different patterns of behavior, (especially patterns that one was taught as a child and likely had reinforced through life into young adulthood), it is a formidable challenge to alter the focus and become appropriately acculturated to appreciate and utilize peers in a team approach to learning in specific courses or across the curriculum.

Since today's graduates of colleges and universities are expected to instantly become participants in a productive and usually competitive vein of society upon their graduation, it is incumbent upon universities to provide the kind of transitional experiences necessary to produce graduates who are ready to function as team players in their respective careers (Bruffee, 1987). Reflections on our experiences and day-to-day activities show us just how significant collaboration is in our society. A physician consults or collaborates with a colleague, possibly even a team as diagnosis is made and course of treatment is planned. Bank employees have loan review panel meetings to decide the disposition of an application for a major loan. Even though we are aware of the effectiveness of the group process, our educational traditions have generally not built these into the curricula of our colleges and

universities. Proponents of collaborative learning stress a team approach to problem solving, a method typically found in the work place. It is apparent that students need opportunities for peer group discussions within the classroom, to prepare them for life's work.

An article by Rau and Heyl reported on the use of collaborative learning groups to assist student learning. They found that students performed higher on test material that was discussed in group sessions. They also concluded that positive social connections between classmates increased significantly and that the great majority of students lauded the use of collaborative learning groups (Rau and Heyl, 1990).

Bruffee, writing in College English, related that while some students welcome collaborative learning enthusiastically, others may feel "forced" if asked to learn collaboratively. Many students feel bewildered at how to go about it. Interestingly, the study by Tucker and Yates "Success Expectations and Preferences for Individual and Collaborative Learning Among Black and White College Students" addressed the beliefs of students about the effectiveness of socially organized group learning environments for them as individuals, as well as their preferences. The study concluded that while whites saw little advantage to be gained by working in peer study groups, blacks perceived substantial advantages to using such an approach (Tucker and Yates, 1976). Their study is reflective of the work and findings of Jualyne Dodson who cautions us to understand the philosophy of "meness" which has characterized the culture of Blacks and the black family (Dodson, 1989).

There are historical and cultural differences which appear to indicate that black and white students may vary in their expectations and their preferences as related to collaborative learning situations. Traditionally, African and Black American experiences have

emphasized the enjoyability and objective benefits of collective endeavors as compared to individual endeavors (Tucker and Yates citing Mloiti, Herskovitis, Bracey, Meier and Rudwick, 1976). In contrast, White American values typically emphasize individualism. Tucker and Yates assert that while both black and white students can be expected to anticipate objective advantages from collaborative as compared to individual learning efforts. Blacks could anticipate proportionately greater advantages from work with peers and from joint learning approaches (Tucker and Yates, 1976).

Recognizing that ethnic and cultural differences are likely to impact the students' attitude toward being involved in collaborative learning experiences, teachers must be prepared to help students overcome their distrust and hesitancy through a gradual process of developing confidence in their ability to learn on their own. The goals of such a process includes enabling students to feel empowered "to develop and pursue questions and to gain confidence in critically evaluating their own work and that of their peers as well as the subject matter studied" (Bruffee, 1972).

VIII. COLLABORATIVE LEARNING IN DIVERSE STUDENT POPULATIONS

Bruffee reminds us that at the beginning of a semester, students many times enter our classes as strangers, and therefore collaborative learning often begins with a process of reacculturation transforming the student from the traditional classroom to a model for collaborative learning experiences (Bruffee, 1987). And, as Cora Agatucci states, "We must all be aware that there is no new rold pedagogy: that when we ask students to take on radically new languages, habits of mind, belief systems, ways of making sense of the world, we are guiding them through what might be a very painful process of socialization to college culture that may end in failure or deracunation" (Agatucci, 1989). Agatucci goes on to say that "students can be empowered to join knowledge communities in important ways - even in their first months of college - through collaborative classroom activities wherein they perceive themselves gaining competency, confidence, and control" (Agatucci, 1989).

Mike Rose suggests designing collaborative projects which require ...a complete, active, struggling, engagement with the facts and principles of a discipline; to expect less of unprepared students or basic writers is to perpetuate demeaning remedialist stigma; to require only comprehension, memorization, and regurgitation trivializes the academic discipline as well (Agatucci citing Rose, 1989).

Paul Armstrong sees the multicultural classroom as an opportunity to promote "pluralistic literacy," to explore cultural differences and develop, "...the facility to communicate beliefs to others whose frameworks are different and to understand views generated by perspectives incommensinable with their own" (Agatucci citing Armstrong,

1989). This cultural diversity can stimulate the multicultural classroom through comparisons of cultural rituals such as weddings, funerals, New Year's celebrations, etc., according to Terry Dean (Agatucci diting Terry Dean, 1989).

As Rose points out, democratizing American higher education should not be read as sacrificing excellence by increasing access (Agatucci citing Rose, 1989). Collaborative learning offers an opportunity to diffuse cultural tension without the loss of cultural identification.

There are many issues which affect the student populations at any university and cut across cultural or ethnic boundaries. At Dickinson College in Coulyle, Pennsylvania, student interns provide assistance to fellow students in four areas:

1. Career Assistance
2. Tutoring and Academic Enrichment
3. Sexuality Education
4. Alcohol Abuse Prevention.

(Levy-Reiner, 1905)

Davis C. Tracy, Director of Dickinson's Counseling and Placement Center and his staff prepare students for each of these roles. Students maintain office hours and through their student roles assist some students whom counselors may never see - peer to peer trust plays an important role in the day to day functioning of such a program. Students also support the local chapter of BACCHUS (**B**oost **A**lcohol **C**onsciousness **C**oncerning the **H**ealth of the **U**niversity **S**tudents). Students train and conduct group discussion on the responsible and irresponsible use of alcohol (Levy-Reiner, 1985).

The Society of Fellows began in 1980 at Pace University. It is governed jointly by twelve (12) faculty, students and alumni fellows in an effort to promote undergraduate scholarship (Levy-Reiner, 1985). Similar programs have been founded at many institutions which foster through collaborative efforts the opportunity to meet the needs of both the student and the academy.

IX. COLLABORATIVE LEARNING EXPERIENCES DESIGNED TO STRENGTHEN COMMUNICATION SKILLS FOR COLLEGE STUDENTS

Numerous research reports, reports prepared by government agencies and data compiled by college and university admission directors indicate that a vast number of entering freshmen are deficient in the area of communicative skills. The problem is not new to educators, but, has remained a silent topic for discussion until the early 1980's. Since that time, a variety of programs have been implemented in secondary and post-secondary institutions which will hopefully eradicate the problem.

Collaborative learning experiences which incorporate communicative skill experiences appear to be another sound approach. This learning practice may not e conducive for all students but one which will contribute to enhancing developmental skills if utilized in the proper environment. Listed are several collaborative learning experiences which can be used to enhance communicative skills.

A. Thematic unity in reading remediation

> Thematic unity can provide the student/teacher with an opportunity to improve the organization or the content of a reading course. This entails selecting a theme for a number of weeks or for the term that will lend itself to readings in a broad spectrum of academic disciplines and genres.

B. Thematic unity in reading/writing remediation which leads toward an integrated view of communities

> The student has the opportunity to read and write about selected communities. Methods that are dialogic and that focus on problem-posing must be explored. The teacher as facilitator and observer should promote the "abnormal discourse" that occurs when disciplines, departments, and classrooms come together. A university-wide practice must involve the redefinition of learning,

thinking and writing. Students must be involved in the process of critiquing the current educational system.

C. Reading ...and the community

This learning experience relies heavily on family and community involvement, with students teaching their younger brothers and sisters and slow youngsters in the learning group being assisted by the faster student.

D. Teaching English grammar using collaborative learning

Each student prepares a presentation based on the explanation of material from assigned readings in the text; daily quizzes on the material from the assigned reading; and peer grading of the daily quizzes and exams with the instructor spot checking for accuracy of grading.

E. Social Constructionism and Collaborative Learning: Recommendations for teaching writing

Emphasis should be placed on developing a sense of community, focusing on the social or collaborative view of writing. This view contends that writing is taught best as collaborative learning, with the classroom providing a social context in which students come together to develop their writing skills. Therefore, if both thinking and writing are seen as forms of conversation, then collaborative learning as it relates to the teaching of writing is a practical outcome of social constructionism. Several teaching strategies can be employed to create a collaborative environment, such as encouraging group work, re-evaluating writing assignments, and redefining the teacher's role in the writing process.

The implications of collaborative writing is very broad, but definitive. Students must reconsider the nature of composing and their identities as writers when working on a jointly authored piece of writing, such as a two-page report on a particular area in a college or university library. The peer group must of necessity reach some consensus through a struggle to organize material into a two-page report and a fifteen (15) minute presentation. By

demystifying the library for themselves and by negotiating the processes of joint authorship in which individual performance gives way to language as a social practice (i.e. group performance), students move into later assignments which require them to use resources outside the self, enabled by familiarity with library resources and some confidence about their abilities to find out what they need to know. Finally, the student gets a sense of what it is like to participate in the academic community through academic discourse.

X. CONTINUING EDUCATION MODELS FOR THE ADULT LEARNER

Collaborative learning experiences for the adult are more apt to be feasible when implemented than that for the traditional student. This factor alone provides the teacher with an opportunity to explore different approaches to collaborative learning. In most cases, the instructor of record will find that:

(1) Adults react positively to this form of learning because of collaborative experiences encountered in the work place.

(2) Adults have a greater sense of self and therefore do not share the self-doubts like those of their younger peers.

(3) Adults have in many cases been exposed to a broader spectrum of cultural diversity. Many of the traditional barriers are not factors in this form of environment.

Model: Continuing Education Collaboration
Course for the Adult Learner

Degree Program: Master in Counseling
Class: Marriage and the Family

Class Project/Collaborative Learning Experience

Learning Experience No. 1

Adult learners would select classmates to research the role of those positions noted; and, in a public forum share the information with their peers.

Learning Experience No. 2

Adult learners form/develop a slate of questions which are felt to be generic and pertinent to all members of the community. These questions would be addressed in an open forum by those professionals noted in figures four-six (fig. 4-6). The adult learners, after receiving responses to the questions would discuss the information acquired in great depth. Various insights as they would relate to social and cultural differences would be expected to be a formal part of the interaction.

Learning Experience No. 3

Adult learners accept roles for each position noted. Classmates have the opportunity to interact.

MODEL: CONTINUING EDUCATION COLLABORATION
COURSE FOR ADULT LEARNERS

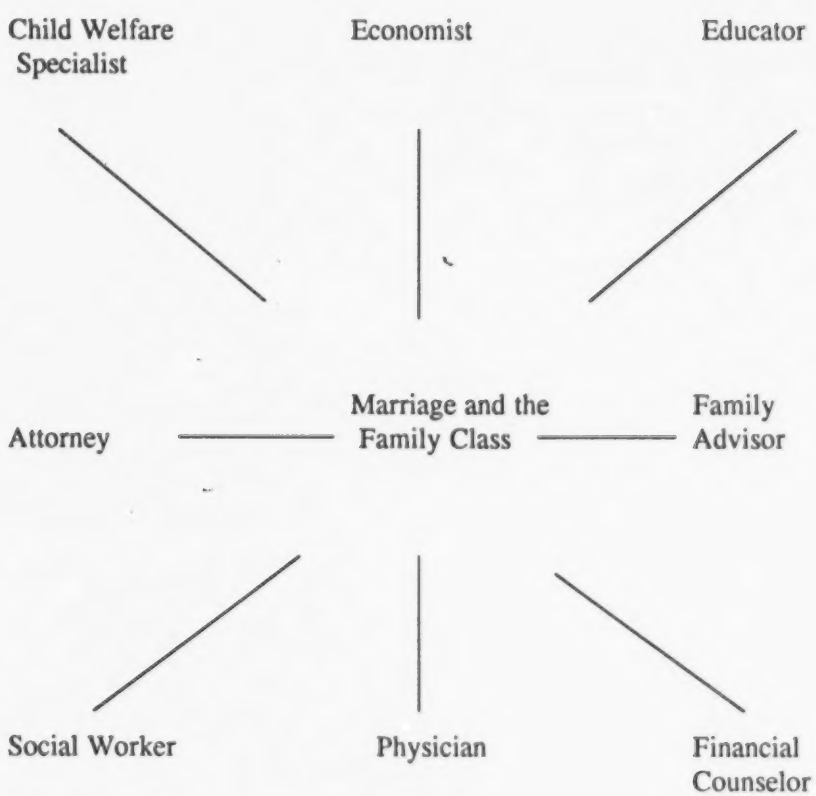

Figure 3

DEGREE PROGRAM: MASTER IN COUNSELING
CLASS: COUNSELING PHYCHOLOGIST
CLASS PROJECT/COLLABORATIVE LEARNING EXPERIENCE

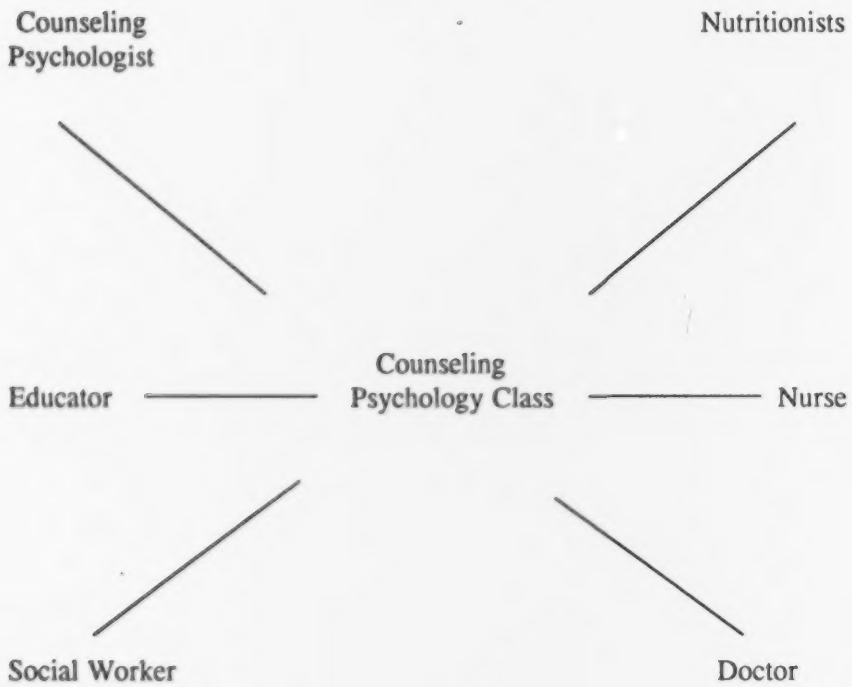

Figure 4

DEGREE PROGRAM
CLASS: SPORTS ADMINISTRATION
CLASS PROJECT/COLLABORATIVE LEARNING EXPERIENCE

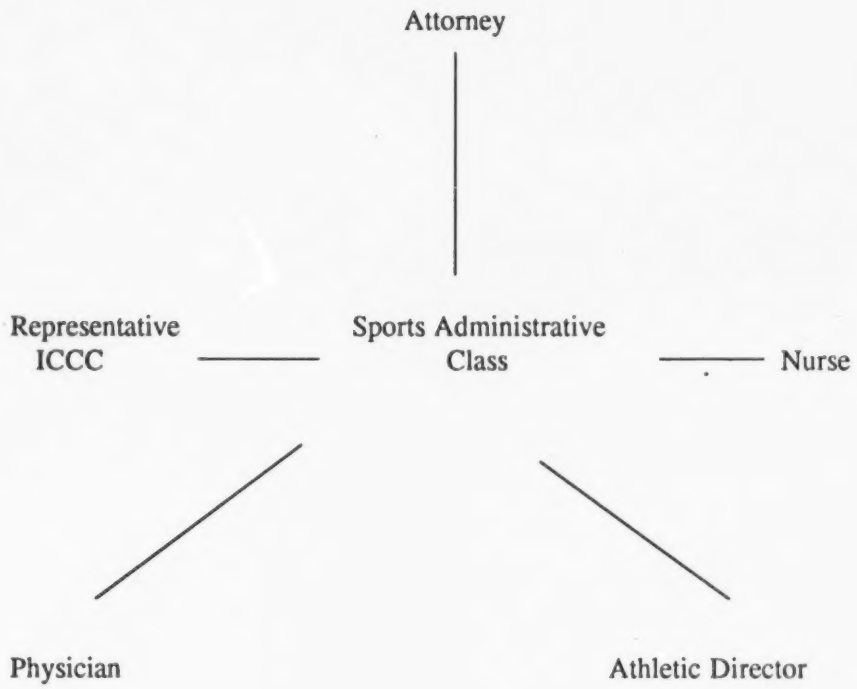

Figure 5

XI. EVALUATION IN COLLABORATIVE LEARNING

Harvey Wiener in his "Collaborative Learning: A Guide to Evaluation" suggests that, "Formal assessment has always been the stepchild of the profession" (Wiener, 1986). He goes on to say, "...we have given up important evaluation activities for certifying the success of our students as learners and ourselves as teachers" (Wiener, 1986). In place of effective evaluation procedures, we have allowed the growth of professional testing agencies. Now we have instruments like the National Teacher Examination and many states have created test to assure all of the competencies of its students.

Kenneth Bruffee in his "Collaborative Learning: Some Practical Models" defines the section entitled "Collaborative Learning Convention" a methodology for evaluation of his students:

1. Class members will be responsible to each other and the teacher for evaluation. Each student paper will be read and evaluated by a jury of at least two class members; hence, each student will read two papers as a juror for each one paper he writes himself. After the student jury has considered each paper, the teacher will read, evaluate it, weighing student critical opinion with his own, providing his own written comment, and assigning a grade if necessary.

2. Twice during the term (mid-term and end-of-term) class members will evaluate their own work, the work of their group, the class as a whole and the teacher's contribution. Also, at these times the class as a whole will recapitulate the subject matter covered. Discussion of the nature and process of the course will be channeled to these limited periods in order to insure coherent, uninterrupted consideration of the subject matter during the balance of the term (Bruffee, 1973).

Bruffee believes that students embracing these methods will gain increasing confidence and ability in assessing their own work and the work of their peers (Bruffee, 1973).

At Rensselor Polytechnic Institute (RPI) in Troy, New York, undergraduate biomedical engineers work to design equipment for adults and children afflicted with cerebral palsy. Patients from the Cerebral Palsy Center for the Disabled have equipment specially designed for their needs by teams of students who receive National Science Foundation Grants of $500.00 per team to design and build equipment for the cerebral palsy patients. This equipment helps the center's residents to negotiate life in a more independent fashion (Newell, 1990).

In evaluating the work of each team, Jonathan Newell has designed an assessment instrument which provides grading criteria for the students and their colleagues. Newell says, "What we suspected, the students confirm..." Student responses on the forms are frank and in general are in close agreement with the professor's observation (Newell, 1990).

Hallie S. Lemon offers, "If the students can respect our knowledge of the subject, trust us to know the most effective ways of transferring that knowledge or skill, and feel our concern for individual problems and successes, we are free to restructure the classroom in a variety of ways" (Lemon, 1988). In summarizing the results of her survey of teachers of composition, she states that, "...collaborative tasks are being assigned at all stages of the writing process... and based on the theories of learning which underlie collaborative work, we should be designing more" (Lemon, 1988).

Ronald Strickland, assistant professor of English at Illinois State University states, "...we don't have to accept the privileged inviolability of the 'knowledge' we are teaching or the conventional methods of teaching it" (Strickland, 1990). He further suggests, "Psychoanalytic critics have rethought the traditional opposition of 'knowledge' and 'ignorance' by seeing 'ignorance' as an active form of resistance to knowledge, and by identifying the individual student's resistance to knowledge as analogous to the repression of the unconscious" (Strickland, 1990). Strickland's approach is to advocate a strategy of "confrontational pedagogy" suggesting that the literature teacher "adopt a confrontational stance toward students, and a critical, skeptical stance toward the subject matter: teachers should avoid posing as mentors to their students and champions of their subject" (Strickland, 1990).

Strickland cites Shoshana Felman's essay on psychoanalysis and pedagogy which states, "the single most important contribution of psychoanalysis to education is that psychoanalysis reveals "the radical impossibility of teaching" (Strickland citing Felman, 1990). Strickland defines the "teaching Felman refers to as "...the transmission of existing knowledge from an authoritative, knowing teacher to an ignorant student who desires to know" (Strickland, 1990). This pedagogical approach assigns teaching the role of indoctrination says Strickland and, "provides no discursive space in which new knowledge can be produced" (Strickland, 1990). In confronting students Strickland seeks to "demystify the institutional function which this authority [teacher's] is constructed to serve" (Strickland, 1990).

Strickland's approach to evaluation is a collaborative model which should be examined. He requires, "several one or two page critical response/position papers on issues concerning the structure, content, and practice of the course" (Strickland, 1990). He then groups 8-10 of the student texts and in some cases position papers against other texts and submits these to the class on a weekly basis. The papers are then included as part of the text used in his course. Strickland maintains that this serves to "decenter the institutionally authorized content of the course, and produce alternative centers of meaning (on the margins of the discipline) where readers situated differently in relation to class, race, gender, and other significant discursive categories engage the official texts (Strickland, 1990).

This process encourages students to respond carefully to issues raised in the course and adds to the textual diversity studied by the class. While some teachers recommend reading journals for this purpose, Strickland feels the response/position paper to be superior as all participants benefit from examining a multitude of papers.

He also suggests alternatives to the traditional grading system. He feels that at the end of the semester, the teacher should write a 1-2 page evaluation of the student's work and give the student an opportunity to respond. Both documents would remain as part of a student's permanent record; and, as Strickland puts it, allows the student to help in his own assessment as, "...a productive continuation of the learning process" (Strickland, 1990).

In the application of evaluation methodologies, we as teachers in our various disciplines determine the futures of our students and control the opportunities which come their way. In considering collaborative learning as an alternative teaching strategy, teachers

are able to make students a part of the evaluation process and diffuse the ability of the student to question his/her assessment.

XII. COLLABORATIVE EXPERIENCES WITH HIGHER EDUCATION, INDUSTRY AND GOVERNMENT

Collaborative learning experiences have traditionally been limited to interaction among students in a controlled environment. Although the learning experiences, cultural and social interaction can and should not be overlooked, the teacher may choose to extend the students exposure through non-campus sources. The proposed format for such an experience will fluctuate from one organization to another. However, the structural content may remain the same within an academic program.

The figures on the following pages delineate the type of collaborative learning experiences which a class might encounter with business, industry and government. The general assumption connected with each is as follows:

(1) Through collaborative learning the student will interact as it relates to discussing specific issues, titles, etc. as noted.

(2) Through collaborative learning, the student will analyze the subject, topics and areas as it relates to the established course objectives.

(3) Through collaborative learning, the student will experience a thoughtful exchange of views with those business, industrial and government officials assembled. The views should be essential to a further understanding of the subject as well as developing such.

DEGREE PROGRAM:
CLASS: EDUCATION AND THE COMMUNITY
CLASS PROJECT/COLLABORATIVE LEARNING EXPERIENCE

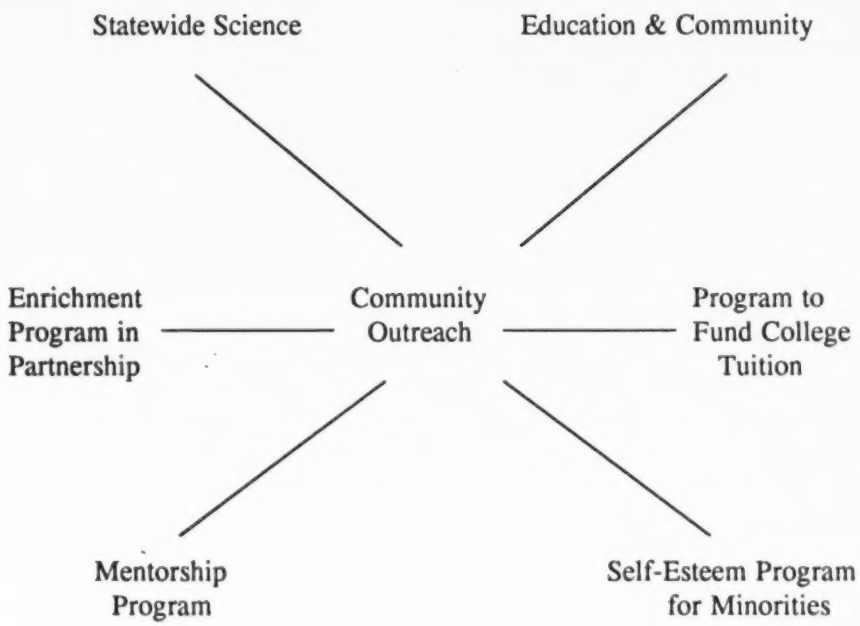

Figure 6

DEGREE PROGRAM: BACHELOR
CLASS: FINE ARTS ADMINISTRATION
CLASS PROJECT/COLLABORATIVE LEARNING EXPERIENCE

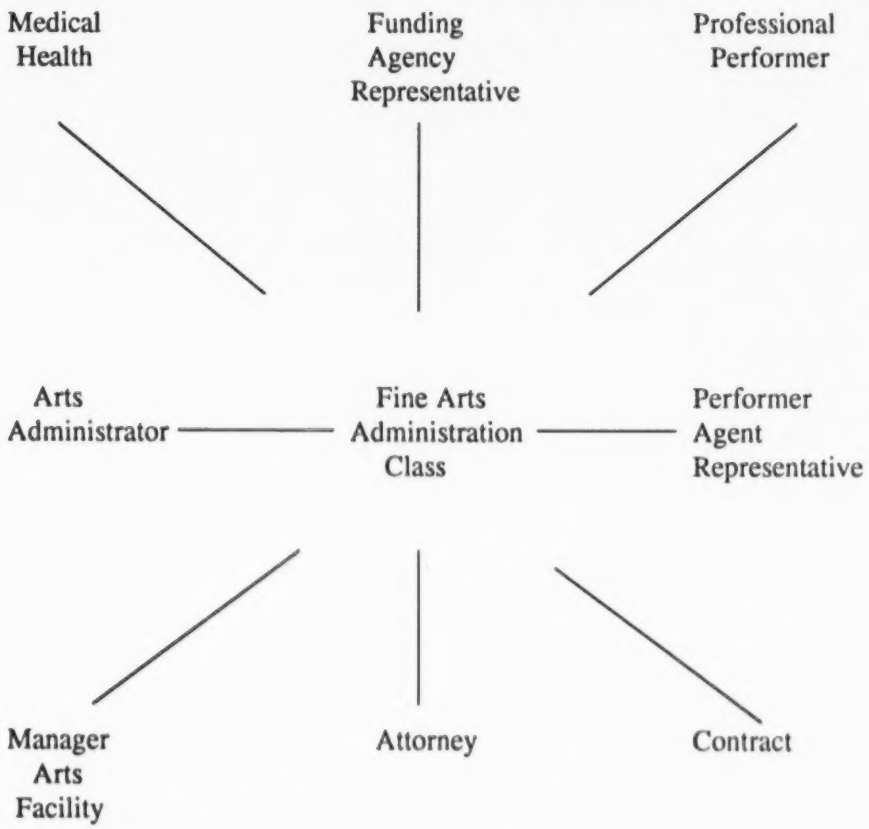

Figure 7

DEGREE PROGRAM
CLASS: MUSIC BUSINESS
CLASS PROJECT/COLLABORATIVE LEARNING EXPERIENCE

Figure 8

XIII. ANTICIPATED SOURCES OF STATE LEVEL SUPPORT

1. State Council on Higher Education
2. State Department of Education
3. State Department of Mental Health, Mental Retardation and Substance Abuse
4. State Department of Mental Retardation
5. State Department of Aging
6. State Department of Rehabilitation Services
7. State Department of Social Services
8. State Department of Corrections
9. State Department of Parks and Recreation
10. State Department of Youth and Family Services

Possible resources include field sites for volunteer experiences, guest lecturers, employment sites and sources of data regarding specific populations and problem areas.

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